SHARED FINDINGS

From a Recent Interoperability Evaluation of the Common Alerting Protocol (CAP1.1)

Edgewood Chemical Biological Center (ECBC)
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In Preparation for the 2007 Coalition Warfighter Interoperability Demonstration

IEM®

CWID Purpose

Coalition Warfighter Interoperability Demonstration

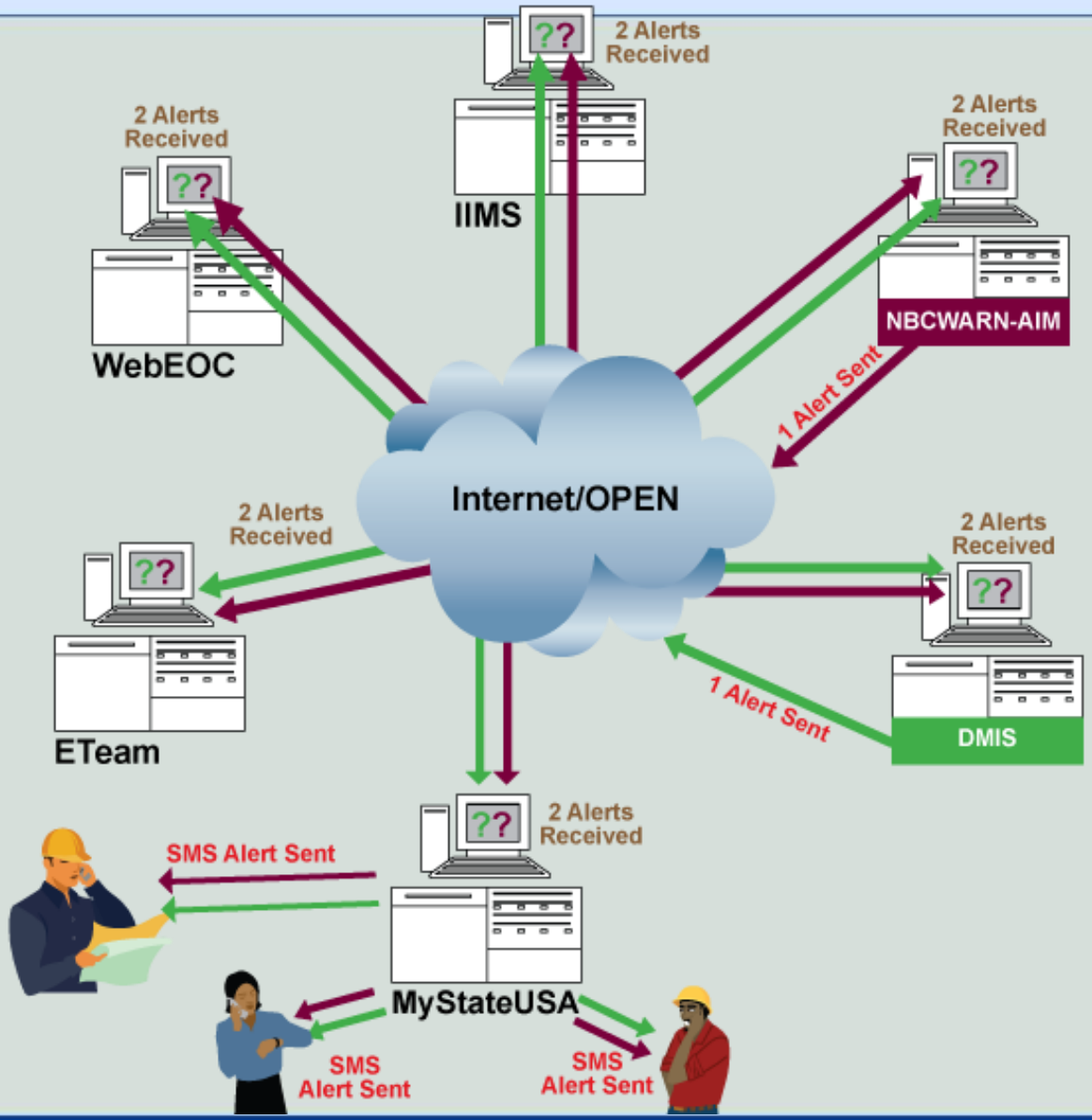
- CWID: To demonstrate interoperability among different military & Civilian hardware and software systems

- Trial 3.27 (ECBC): To demonstrate the capability of sharing Common Alerting Protocol (CAP 1.1) messages and polygons across Civilian/DHS and DoD domains

ECBC Test Lab Environment

- LAN set up with Internet access
- Connected DoD IIMS, NBCWARN-AIM, DMIS, OPEN, MyStateUSA, ETeam, and WebEOC products
- Performed data sharing tests
- Viewed *User Authored Alert* CAP messages sent from other EM software platforms to determine CAP message views

Test Environment



IMPORTANT!

Each system is doing its job, but HUMANS may not immediately understand message output from a system other than their own!

Need for Improvement

- CAP message content can be somewhat cryptic, requiring users to interpret meaning from abbreviations and data sequence. (E.g. How should we differentiate between sensor data CAP messages and true alert CAP messages?)

- Inconsistent CAP message formats among different EM systems introduce / increase the likelihood that EOC users will misinterpret / misunderstand CAP message content from another system.

- Continued…

Need for Improvement continued…

- Content from the Event Description field is sometimes delivered verbatim to the public; content may include extraneous characters sent from a system, such as a slash (/), colon (:), etc.

- How do we minimize “false alarms” to the public? (Example: there is currently about a 90% false alarm rate for tornado warnings, resulting in the public beginning to question the validity of future warnings.)

CAP Message "Recognition" Fields in *Alert List* GUIs

Cap 1.1 Standard	DMIS	MyStateUSA	WebEOC	ETeam	NBC WARN AIM	Cell Phone
Event	X	---	---	X	X	---
Headline	---	X	X	X	X	X
Description	---	X	---	X	X	X
Instruction	---	---	---	---	---	---
Area DESC	---	---	---	---	---	---
Expires (DTG)	---	----	----	----	---	----

CAP Authoring Fields

and How They Appear in a System's GUI

Cap 1.1 Standard	DMIS	MyStateUSA	WebEOC	ETeam	AIM
Event	2	1	1	UNK	2
Headline	2	1	1	UNK	2
Description	2	1	1	UNK	2
Instruction	2	----	----	UNK	2
Area DESC	2+	1	----	UNK	2
Expires (DTG)	2	----	----	UNK	2

1 = Primary GUI 2 = Secondary GUI

Recap & Recommendations

- Not all CAP messages are alike.
- The independent development efforts surrounding different EM systems have resulted in dissimilar CAP message formats and a variety of human user interfaces.
- Users of one system may not immediately understand messages from another system. How are CAP messages differentiated?
- Reconsider how the Event Description field is used when non-parsed messages are used to populate content for this field.
  - What does the public need to know / do?
  - To remain viable, how do we reduce false alarms?
- A three tiered approach can be taken to remedy these messaging and user interface problems…

Recommendations for Immediate Action

- Train all users when creating *User Authored Alert* CAP messages to use redundant text – to REPEAT a 2-8 word descriptive message event title (that includes where & what) in the: event, headline, and first text of the event description fields. Examples:
    - Washington DC RDD
    - Sealston, VA Power Plant Explosion
    - Charleston AFB Chlorine Release

- For CWID only: use Area Description field to name polygon

Recommendations for Near Term Action

EM vendors make system modifications:

- When displaying the CAP Message *Alert List*, incorporate event headline and truncated event description field into the Primary GUI.

- When creating a *User Authored Alert* CAP message, the system should require the user to enter the Headline and Event Description fields as part of the authoring process.

Recommendations for the Long Term

- OASIS has done a good job creating standards and procedures for interoperability between and among technologies.
- We should encourage OASIS to establish similar standards and procedures for user interfaces that are associated with these technologies. For example: standards for alert messaging and data representation.*
- Software vendors will develop an automated process which, in the absence of an author-generated CAP headline,
  - Creates a headline field, indicating it is machine generated; and
  - Populates the content of the headline from data stored within the message itself.

* Some draft standards are already partially addressing this.

Questions

Discussion

Thanks

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